	Application No.	Applicant(s)
Notice of Allowability	09/918,295	TRAUT ET AL.
	Examiner	**Art Unit**
	Leslie Wong	2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _03/10/2005_.

2. ☒ The allowed claim(s) is/are _8-9, 11, and 13-20 and now renumbered as 1-11_.

3. ☒ The drawings filed on _03 January 2002_ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached .

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _5 IDSes_

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Information Disclosure Statement

1.   Applicants' Information Disclosure Statements, filed 01/30/2002, 03/19/2002,

04/03/2002, 04/09/2002, and 03/22/2004 have been received, entered into the record,

and considered. See attached form PTO-1449.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Johnathan Waldman on 08 June 2005.

The application has been amended as follows:

In claim 8, line 1, replace "the" with – a –

In claim 8, line 3, after "establishing in", replace "the" with –a –

In claim 8, line 3, after "drive of", replace "the" with --a --

In claim 8, line 6, after "to be", delete – the –

In claim 8, line 6, after "to be", insert –a physical –

In claim 8, line 7, after "system", insert -- and the differencing drive comprising a bit map that identifies blocks of the virtual hard drive that are present in the differencing drive; --

In claim 8, line 8, after "to the", insert --virtual --

In claim 8, line 10, after "recording", replace "the" with --a--

In claim 9, line 1, after "performing", replace "a" with -- the --

In claim 9, line 2, after "drive of", replace "an" with -- the --

In claim 9, line 3, after "comprises", delete -- the step of --

In claim 11, line 3, after "establishing in", replace "the" with --a --

In claim 11, line 3, after "drive of", replace "the" with --a --

In claim 11, line 6, after "to be", delete -- the --

In claim 11, line 6, after "to be", insert --a physical --

In claim 11, line 8, after "to the", insert --virtual --

In claim 11, line 10, after "recording", replace "the" with -- a --

In claim 11, line 13, after "prompting", replace "the" with -- a --

In claim 11, line 13, after "system", insert -- at the conclusion of a computing session --

In claim 11, line 14, after "the", insert -- virtual --

In claim 11, line 15, after "the", insert -- virtual --

In claim 11, line 16, after "content of the", insert -- virtual --

In claim 11, line 17, after "content of the", insert -- virtual --

In claim 13, line 1, after "performing", replace "an" with -- the --

In claim 13, line 1, after "operation on", replace "a" with -- the --

In claim 13, line 2, after "drive of", replace "an" with -- the --

In claim 13, line 3, after "for", replace "a" with -- the --

In claim 14, line 3, after "establishing in", replace "the" with --a --

In claim 14, line 3, after "drive of", replace "the" with --a --

In claim 14, line 6, after "to be", delete -- the --

In claim 14, line 6, after "to be", insert --a physical --

In claim 14, line 8, after "to the", insert --virtual --

In claim 14, line 10, after "recording", replace "the" with -- a --

In claim 14, line 13, after "prompting", replace "the" with -- a --

In claim 14, line 14, after "content of the", insert -- virtual --

In claim 14, line 15, after "the", insert -- virtual --

In claim 14, line 16, after "content of the", insert -- virtual --

In claim 14, line 17, after "content of the", insert -- virtual --

In claim 14, line 18, after "drive to the", delete --content of the--

In claim 15, line 3, after "on", replace "the" with -- a --

In claim 15, line 5, after "drive of the", insert --host --

In claim 15, line 7, after "drive of the", insert --host --

In claim 15, line 10, after "differencing", insert --drive --

In claim 15, line 11, after "content of the", insert -- the --

In claim 15, line 15, after "accommodate", insert -- the --

In claim 19, line 1, after "operation to", replace "the" with -- a--

In claim 19, line 3, after "establishing in", replace "the" with --a --

In claim 19, line 3, after "drive of", replace "the" with --a --

In claim 19, line 7, after "to be", delete -- the --

In claim 19, line 7, after "to be", insert --a physical --

In claim 19, line 9, after "performing a", insert --first --

In claim 19, line 9, after "to the", insert --virtual --

In claim 19, line 11, after "recording", delete --the--

In claim 19, line 11, after "recording", insert -- a first--

In claim 19, line 11, after "result of the", insert -- first--

In claim 19, line 16, after "performing a", insert --second --

In claim 19, line 16, after "to the", insert --virtual --

In claim 19, line 18, after "recording", delete --the--

In claim 19, line 18, after "recording", insert -- a second--

In claim 19, line 18, after "result of the", insert -- second--

In claim 20, line 1, after "performing", replace "a" with – the –

In claim 20, line 2, after "comprising", delete –the step of –

In claim 20, line 4, after "drive at", replace "the" with --a –

Reasons for Allowance

3.   Claims 8-9, 11, 13-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Prior art of record fails to teach a combination of elements including establishing in

a hard drive of a host computer system a plurality of files comprising the virtual hard

drive of the emulated computer system, the plurality of files including a file associated

with a parent drive and a file associated with a differencing drive, the parent drive

appearing to the emulated computer system to be a physical hard drive of the emulated

computer system and the differencing drive comprising a bit map that identifies blocks

of the virtual hard drive that are present in the differencing drive and recording the result

of the write operation in the differencing drive of the virtual hard drive such that write

operations performed to the virtual hard drive of the host computer system are

performed in the differencing drive rather than in the parent drive as recited in

independent claim 8.

Prior art of record fails to teach a combination of elements including establishing in

a hard drive of a host computer system a plurality of files comprising the virtual hard

drive of the emulated computer system, the plurality of files including a file associated

with a parent drive and a file associated with a differencing drive, the parent drive

appearing to the emulated computer system to be a physical hard drive of the emulated

computer system, recording a result of the write operation in the differencing drive of the

virtual hard drive such that write operations performed to the virtual hard drive of the

host computer system are performed in the differencing drive rather than in the parent

drive, and prompting a user of the emulated computer system at the conclusion of a

computing session for a determination of whether the content of the virtual hard drive of

the emulated computer system should revert to the content of the virtual hard drive at

an earlier time as recited in independent claim 11.

Prior art of record fails to teach a combination of elements including establishing in

a hard drive of a host computer system a plurality of files comprising the virtual hard

drive of the emulated computer system, the plurality of files including a file associated

with a parent drive and a file associated with a differencing drive, the parent drive

appearing to the emulated computer system to be a physical hard drive of the emulated

computer system, recording a result of the write operation in the differencing drive of the

virtual hard drive such that write operations performed to the virtual hard drive of the

host computer system are performed in the differencing drive rather than in the parent

drive, and prompting a user of the emulated computer system for a determination of

whether the content of the virtual hard drive of the emulated computer system should

revert to the content of the virtual hard drive at an earlier time as recited in independent

claim 14.

Prior art of record fails to teach a combination of elements including wherein write

operations to the virtual hard drive are made to the primary differencing drive during a

first time interval, the primary differencing drive recording the writes to the virtual hard

drive and expanding in size to accommodate the content of the write operations to the

virtual hard drive during the first time interval and wherein write operations to the virtual

hard drive are made to the secondary differencing drive during a second time interval,

the secondary differencing drive recording the writes to the virtual hard drive and

expanding in size to accommodate the write operations to the virtual hard drive during

the second time interval as recited in independent claim 15.

Prior art of record fails to teach a combination of elements including establishing in

a hard drive of a host computer system a plurality of files comprising the virtual hard

drive of the emulated computer system, the plurality of files including a file associated

with a parent drive and a file associated with a differencing drive, the parent drive

appearing to the emulated computer system to be a physical hard drive of the emulated

computer system, switching the target drive to the secondary differencing drive,

recording the second result of the second write operation in the secondary differencing

drive of the virtual hard drive such that write operations performed to the virtual hard

drive of the host computer system are performed in the secondary differencing drive rather than in the parent drive as recited in independent claim 19.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 9, 13, 16-18, and 20 being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leslie Wong
Patent Examiner
Art Unit 2167

LW
June 10, 2005